

# **EXHIBIT E36**

1 SUPERIOR COURT OF NEW JERSEY  
2 LAW DIVISION: MIDDLESEX COUNTY

3 RICARDO RIMONDI and  
4 PILAR RIMONDI,  
5 Plaintiffs,  
6 vs.  
7 BASF CATALYSTS LLC, et al.,  
8 Defendants.

9 JOANNA RUMAN and  
10 JACENTY RUMAN,  
11 Plaintiffs,  
12 vs.  
13 BASF CATALYSTS LLC, et al.,  
14 Defendants.

15 DEPOSITION OF  
16 WILLIAM E. LONGO, PhD  
17 January 7, 2019  
18 10:30 a.m.  
19  
20 11555 Medlock Bridge Road  
21 Suite 100  
22 Johns Creek, Georgia

23 Debra R. Luther, RMR, CRR, CCR-B-881  
24 Atlanta Reporters, Inc.  
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<p>1 INDEX TO EXHIBITS (Continued)</p> <p>2</p> <p>3 12 Scanning Electron Microscopy and 99 Transmitted Electron Backscatter 4 Diffraction Examination of Asbestos Standard Reference Materials, 5 Amphibole Particles of Differing Morphology, and Particle Phase 6 Discrimination from Talc Ores (Bandli and Gunter, 2014)</p> <p>7 13 ISO 22262-2 118</p> <p>8</p> <p>9</p> <p>10 (Original Exhibits 1 through 13 have been attached to the original transcript.)</p> <p>11</p> <p>12</p> <p>13</p> <p>14</p> <p>15</p> <p>16</p> <p>17</p> <p>18</p> <p>19</p> <p>20</p> <p>21</p> <p>22</p> <p>23</p> <p>24</p> <p>25</p> <p>Atlanta Reporters, Inc. 866-344-0459 www.atlanta-reporter.com</p>	<p>10:29:30 1 Q. This is Ruman and Rimondi, actually. The</p> <p>10:29:34 2 top one's Rimondi.</p> <p>10:29:36 3 A. <b>Here's Ruman. The other one is Rimondi.</b></p> <p>10:29:57 4 <b>I also was sent these documents.</b></p> <p>10:30:14 5 Q. Are those the documents that are</p> <p>10:30:19 6 referenced in the letter?</p> <p>10:30:21 7 A. <b>Yes.</b></p> <p>10:30:21 8 Q. And we'll mark -- well, talk about it in a</p> <p>10:30:27 9 second.</p> <p>10:30:27 10 A. <b>I brought the Ruman and the Rimondi</b></p> <p>10:30:37 11 <b>exposure calculations that I've been doing for both</b></p> <p>10:30:49 12 <b>plaintiffs. And then for the amounts of talc per</b></p> <p>10:30:53 13 <b>application, I brought some J&amp;J documents for heavy</b></p> <p>10:30:57 14 <b>users, full body users, that I base my calculations</b></p> <p>10:31:01 15 <b>on.</b></p> <p>10:31:08 16 <b>I brought along a reliance list that's up</b></p> <p>10:31:12 17 <b>to 96 now.</b></p> <p>10:31:17 18 MR. HORN: 96 or 97?</p> <p>10:31:26 19 MR. EWALD: 97.</p> <p>10:31:33 20 Q. (By Mr. Ewald) It does say 96 in the</p> <p>10:31:36 21 folder but --</p> <p>10:31:36 22 A. <b>That's me.</b></p> <p>10:31:38 23 Q. Okay.</p> <p>10:31:39 24 A. <b>I brought along the McCarthy global talc</b></p> <p>10:31:44 25 <b>exposure for estimates. I didn't bring along the</b></p> <p>Atlanta Reporters, Inc. 866-344-0459 www.atlanta-reporters.com</p>

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14:45:37 **1** support that proposition?

14:46:21 **2 A. I'm wrong. Here it's 1.605 to 1.660. So**

14:46:27 **3 you can use anything you want.**

14:46:30 **4 Q. What were you just looking at?**

14:46:31 **5 A. Oh, I'm looking at the ISO 22262-1, page**

14:46:39 **6 15.**

14:46:42 **7 Q. So does that mean you withdraw that**

14:46:44 **8 criticism of Dr. Sanchez?**

14:46:46 **9 A. I withdraw that. That's typically what**

14:46:51 **10 all the labs use. I misspoke when I said that it**

14:46:55 **11 would be the standard method.**

14:46:57 **12 My criticism is if you're going to try to**

14:47:00 **13 say there is something that is wrong about a**

14:47:02 **14 particular identification by PLM and you have the**

14:47:04 **15 same samples, use the same protocol, because you**

14:47:09 **16 should be able to show the differences at 1.605 to**

14:47:14 **17 make your point. Because as you go higher and some**

14:47:18 **18 of the colors that you see, from the golds to blues,**

14:47:22 **19 kind of start blending together for the two types.**

14:47:26 **20 That's what we see when we used our cummingtonite**

14:47:29 **21 standard and compared it to anthophyllite.**

14:47:43 **22 Can we take 3 minutes?**

14:47:47 **23 MR. EWALD: Sure.**

14:47:48 **24 (Recess from 2:47 p.m. to 3:02 p.m.)**

15:02:04 **25 Q. (By Mr. Ewald) What authority do you cite**  
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15:02:09 **1** for the proposition that cummingtonite is regulated

15:02:13 **2 asbestos?**

15:02:13 **3 A. Well, the one right off the top of my head**

15:02:17 **4 is the NIOSH Roadmap. Cummingtonite and grunerite is**

15:02:30 **5 a -- cummingtonite-grunerite is a regulated asbestos.**

15:02:39 **6 Q. Do you have a specific part of the Roadmap**

15:02:43 **7 in mind?**

15:02:43 **8 A. It's all over in there.**

15:02:49 **9 Q. Anything else come to mind besides NIOSH**

15:02:56 **10 Roadmap?**

15:02:56 **11 A. I can't think of anything off the top of**

15:03:00 **12 my head. I haven't looked further than the NIOSH**

15:03:05 **13 Roadmap.**

15:03:05 **14 Q. You make reference in your November 14th**

15:03:09 **15 report to fibrous talc. What do you define as**

15:03:17 **16 fibrous talc?**

15:03:18 **17 A. Anything that has parallel sides and at**

15:03:21 **18 least a 5:1 aspect ratio.**

15:03:32 **19 Q. Is it your understanding that fibrous talc**

15:03:35 **20 is a regulated mineral?**

15:03:40 **21 A. No. I know there's been some talk that**

15:03:45 **22 IARC classifies it as a carcinogen. I don't have any**

15:03:53 **23 opinion one way or the other. I'm just saying it's**

15:03:55 **24 there and this is the qualitative estimate of how**

15:03:59 **25 many is present.**  
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15:04:05 **1 Q. In your report you refer to it as a**

15:04:10 **2 semiquantitative estimate?**

15:04:11 **3 A. Yes.**

15:04:12 **4 Q. You just referred to it as a qualitative**

15:04:17 **5 estimate. Is there a difference in your mind between**

15:04:19 **6 those two?**

15:04:19 **7 A. No, not really. It's not a guess. It's**

15:04:22 **8 just an estimate based on the mount and four grid**

15:04:27 **9 openings and this is what they're seeing in the rest**

15:04:30 **10 of the 96 grid openings, how many they typically will**

15:04:35 **11 see routinely in each grid opening, and we just**

15:04:39 **12 validate one for each -- you know, every time we see**

15:04:43 **13 it.**

15:04:43 **14 Q. How did you decide on looking at four grid**

15:04:48 **15 openings?**

15:04:49 **16 A. To count what was in four grid openings.**

15:04:53 **17 Because it's not something that -- other than it's**

15:04:57 **18 present and this is the approximate concentration, it**

15:05:01 **19 didn't go any further than that.**

15:05:02 **20 Q. The report on page 11 refers to four grid**

15:05:08 **21 openings as being random. How were they randomly**

15:05:12 **22 selected?**

15:05:12 **23 A. There's no protocol for random. It's just**

15:05:15 **24 four in the overall analysis.**

15:05:18 **25 Q. Did you follow any protocol to use this**  
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15:05:23 **1** semiquantitative estimate for fibrous talc?

15:05:25 **2 A. There's no protocol for that.**

15:05:38 **3 Q. Let's turn back to ISO 22262-1 on page 22,**

15:05:43 **4 section 7.2.3.7.1, morphology. Let me know when**

15:05:49 **5 you're there.**

15:05:50 **6 A. I'm there.**

15:05:56 **7 Q. Now, you referenced earlier -- what is**

15:05:59 **8 your understanding of how many particles were**

15:06:03 **9 identified by MAS as bundles in the November 14th**

15:06:08 **10 report?**

15:06:08 **11 A. For PLM?**

15:06:10 **12 Q. For PLM.**

15:06:11 **13 A. They're all bundles.**

15:06:13 **14 Q. Do you have a sense of how many that is**

15:06:16 **15 for PLM?**

15:06:18 **16 A. They're only seeing bundles. We're only**

15:06:22 **17 seeing the very largest structures. So every one of**

15:06:25 **18 the ones that were photographed or observed were**

15:06:28 **19 bundles.**

15:06:29 **20 We're not seeing anything smaller than**

15:06:31 **21 these 80 to 100 to 200 micrometer bundles, and**

15:06:37 **22 typically nothing -- on the width nothing smaller**

15:06:43 **23 than about 5 to 10 micrometers.**

15:06:50 **24 Q. If you look there at section (c), the**

15:06:59 **25 (c)(1), parallel fibers occurring in bundles, my**  
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15:07:02 1 understanding from your previous testimony is it's  
15:07:08 2 your opinion that what you were seeing -- or what the  
15:07:13 3 PLM analyst was seeing were parallel fibers occurring  
15:07:16 4 in bundles; is that fair?  
15:07:17 5 **A. That's fair.**  
15:07:19 6 **Q. Are you aware of any PLM images in your**  
15:07:24 7 **November 14th report that you interpret as showing**  
15:07:30 8 **fiber bundles displaying splayed ends?**  
15:07:38 9 **A. I don't think there's any splayed ends.**  
15:07:40 10 **There may be one or two. That's not something that**  
15:07:44 11 **we see with these types of asbestos, either the**  
15:07:48 12 **tremolite series or the anthophyllite series.**  
15:07:51 13 **The characteristics of the asbestos is**  
15:07:53 14 **that it's not flexible. It's brittle. So there may**  
15:07:58 15 **be one or two in there that has a splayed end, but**  
15:08:04 16 **otherwise we don't see splayed ends.**  
15:08:08 17 **Q. Is there authority that you would cite for**  
15:08:11 18 **the proposition that you wouldn't expect to see**  
15:08:14 19 **splayed ends with tremolite or anthophyllite?**  
15:08:16 20 **A. Where are my reference documents?**  
15:08:31 21 **Q. There you go.**  
15:08:36 22 **A. If you go to the Asbestos in Ontario -**  
15:08:52 23 **Ontario Department of Mines and Northern Affairs,**  
15:08:55 24 **Industrial Mineral Report 36, 1971, they give the**  
15:09:03 25 **physical characteristics of chrysotile, amosite,**  
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15:09:08 1 **crocidolite, tremolite, and anthophyllite.**  
15:09:10 2 **When they look at tremolite-anthophyllite,**  
15:09:12 3 **when you compare tensile strength to chrysotile,**  
15:09:16 4 **amosite, and crocidolite, it is approximately**  
15:09:20 5 **4,000 psi versus 80 to 90 to 100 psi. And also it**  
15:09:27 6 **says that they are not flexible, that they're**  
15:09:31 7 **brittle, and that's the characteristic of that type**  
15:09:33 8 **of asbestos.**  
15:09:34 9 **So if you have brittle, it tells you that**  
15:09:38 10 **it can't be flexible, and it has, quote, low tensile**  
15:09:44 11 **strength as compared to the three primary regulated**  
15:09:47 12 **asbestos types that are used in construction**  
15:09:51 13 **products. I forget what page it's on, but that's in**  
15:09:57 14 **there.**  
15:09:57 15 **Q. Any other authority for that proposition**  
15:10:00 16 **you can think of right now?**  
15:10:01 17 **A. I haven't researched all the different**  
15:10:03 18 **papers out there on physical characteristics. This**  
15:10:06 19 **is one of the few that I've seen that actually goes**  
15:10:09 20 **in and talks about tensile strength, flexibility, as**  
15:10:13 21 **compared to the regulated asbestos fibers.**  
15:10:15 22 **Q. And was that number 36 on your --**  
15:10:19 23 **A. No.**  
15:10:19 24 **Q. I heard a reference of 36. Which**  
15:10:22 25 **reference number is it, just for the record?**  
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15:10:24 1 **A. It was right in front of me a second ago.**  
15:10:33 2 **22.**  
15:10:34 3 **Q. Are you aware of any authority that says**  
15:10:44 4 **specifically you shouldn't expect to see splayed ends**  
15:10:51 5 **in bundles of anthophyllite or tremolite under a PLM**  
15:10:57 6 **microscope?**  
15:10:58 7 **A. No.**  
15:10:58 8 **Q. As you sit here today do you have a**  
15:11:11 9 **specific recollection of one or two of the PLM images**  
15:11:18 10 **displaying bundles with splayed ends, or is that kind**  
15:11:21 11 **of a --**  
15:11:22 12 **A. Specific recollection, no. I'd have to go**  
15:11:24 13 **through each one of them. I thought there was a**  
15:11:27 14 **couple in there.**  
15:11:28 15 **Q. All right.**  
15:11:28 16 **A. At least how I read this, in order for it**  
15:11:30 17 **to be determined to be asbestiform, it says, In**  
15:11:33 18 **addition, observation of any of the following**  
15:11:36 19 **characteristics for the fiber type under**  
15:11:39 20 **consideration provides additional confirmation that**  
15:11:42 21 **the fibers are asbestiform. First one, parallel**  
15:11:46 22 **fibers occurring in bundles. Don't think it needs to**  
15:11:50 23 **say splayed ends. And again, that's a geological --**  
15:11:53 24 **and fibers in forms of thin needles.**  
15:11:56 25 **Q. We'll get to that in a second, and I'm not**  
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15:11:58 1 necessarily -- well, at least right now I'm not  
15:12:01 2 debating whether or not -- if it has splayed ends or  
15:12:04 3 not, you know, whether that's a necessary  
15:12:08 4 requirement. I'm just going to go down the list.  
15:12:10 5 So the only way we're going to determine  
15:12:18 6 if any of the PLM images show fiber bundles  
15:12:22 7 displaying splayed ends is to go through each one;  
15:12:26 8 fair?  
15:12:26 9 **A. That's fair.**  
15:12:30 10 **Q. And would you expect to see splayed ends**  
15:12:33 11 **on both sides of the bundle, or is it sufficient in**  
15:12:36 12 **your mind to have it on just one?**  
15:12:38 13 **A. I wouldn't expect to see splayed ends on**  
15:12:41 14 **any of them. I think there's some long bundles in**  
15:12:44 15 **there that have them, but splayed ends is not a**  
15:12:49 16 **characteristic, in my opinion, of either tremolite or**  
15:12:51 17 **anthophyllite on these accessory minerals.**  
15:12:54 18 **Now, there is one mine of anthophyllite, I**  
15:12:56 19 **think it's in Finland, that was used in one product.**  
15:12:59 20 **That is very fibrous. That's a different**  
15:13:02 21 **characteristic. They may have splayed ends. I don't**  
15:13:05 22 **know. I'd have to get a sample of it.**  
15:13:13 23 **Q. What is your basis for concluding that**  
15:13:16 24 **that type of anthophyllite is different in basic**  
15:13:20 25 **fibrosity, I guess, than the kind that you believe**  
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15:13:24 1 you're finding in J&J talc?

15:13:29 2 A. That's an actual asbestos mine for

15:13:32 3 anthophyllite, and it was used in a product called

15:13:35 4 Haveg, which was a plastic pipe composite used in

15:13:41 5 chemical industries in some cases where they had to

15:13:45 6 have resistance to acid. The companion product to

15:13:49 7 that made by a different company is Bondstrand or

15:13:52 8 Ameron. They only used crocidolite, and Haveg used

15:14:00 9 both. But from the documentation, that source is

15:14:05 10 from Finland, and Finland does have the only

15:14:08 11 anthophyllite mine I'm aware of -- or had. That's

15:14:12 12 the only product that was ever used in the United

15:14:15 13 States with anthophyllite.

15:14:16 14 That is a lot more fibrous. Since it is

15:14:21 15 mined and they were mining it, that had more of a

15:14:24 16 geological type fibrosity. It's not what you see in

15:14:30 17 accessory minerals for these talc mines here in this

15:14:33 18 country.

15:14:34 19 Q. And I guess what I'm asking is what are

15:14:44 20 you relying on for your conclusion that the

15:14:48 21 anthophyllite in Finland is different in kind than

15:14:51 22 the accessory mineral that you're identifying in

15:14:54 23 Johnson & Johnson talc?

15:14:57 24 A. I don't have anything. I'm just making

15:15:02 25 the assumption that since it was a commercial mine,

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15:15:04 1 it was used in one product. They would tend to be

15:15:09 2 looking at your typical geological definitions of

15:15:12 3 that. I have not seen a sample of it. I'm just

15:15:15 4 making an observation, since it's mined, a commercial

15:15:22 5 entity.

15:15:24 6 Q. So we talked about section (c)(1) and

15:15:27 7 (c)(2). As you were referencing a little bit

15:15:33 8 earlier, (c)(3) refers to fibers in the form of thin

15:15:36 9 needles.

15:15:39 10 Do you have an understanding as to whether

15:15:42 11 any of the PLM images in your November 14, 2018,

15:15:47 12 report show fibers in the form of thin needles?

15:15:55 13 A. It's unclear about the needle part of

15:15:58 14 that, but the fibers in those bundles are typically

15:16:02 15 half a micron in diameter. And the overall -- if you

15:16:08 16 take one of the bundles and look at the individual

15:16:13 17 fibers and measure them, I don't think I have found

15:16:18 18 any where the average is less than, you know, 1 to

15:16:24 19 30 -- I mean, 30:1, 40:1. Some of those bundles have

15:16:29 20 as high as 200:1.

15:16:31 21 I think in most of the PLM that has been

15:16:35 22 done over time, even with the R-93, people are using

15:16:40 23 aspect ratios of the bundle itself, the width of the

15:16:45 24 bundle, and that's improper. Even the R-93 tells you

15:16:48 25 do not measure the width of the bundle. Measure the

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15:16:52 1 individual fibers in the bundle.

15:16:53 2 Q. So I want to ask you about that, because

15:16:57 3 your November 14th report reports out aspect ratio of

15:17:04 4 the bundle; correct?

15:17:05 5 A. For the TEM.

15:17:07 6 Q. Okay.

15:17:08 7 A. The TEM, you measure the width of the

15:17:11 8 bundle. That's the protocol.

15:17:12 9 Q. Okay.

15:17:12 10 A. PLM, you measure the width of the

15:17:15 11 individual fibers.

15:17:15 12 Q. And does your report reflect the

15:17:22 13 measurements of the individual fibers under PLM?

15:17:25 14 A. No.

15:17:27 15 Q. So is there any way for me to,

15:17:41 16 essentially, know what MAS contends are the

15:17:44 17 individual aspect ratios of the fibers in what you

15:17:48 18 are calling bundles in the November 14th report?

15:17:53 19 A. You couldn't look it up as any individual

15:17:58 20 analysis, but you can take the photographs and the

15:18:01 21 cross polars and you can see the individual

15:18:06 22 striations. One can take a simple millimeter ruler,

15:18:11 23 measure the width, measure the length, and do the

15:18:16 24 math.

15:18:17 25 I did not do that here, but I'll probably

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15:18:19 1 have another column in the supplement if I have time

15:18:22 2 to actually sit down and go through the average

15:18:28 3 aspect ratio of the fibers and the bundles.

15:18:34 4 Q. So absent that, if you do that, the only

15:18:36 5 way for us to know what your opinion is as to the

15:18:39 6 aspect ratio for individual fibers that you are

15:18:42 7 identifying within a bundle is to go through each PLM

15:18:48 8 image and get your opinion on that; is that fair?

15:18:50 9 A. That's fair.

15:18:58 10 Q. Then we go to (c)(4), matted masses of

15:19:05 11 individual fibers. Are you aware of any instances of

15:19:12 12 matted masses of individual fibers with the PLM

15:19:15 13 images in your November 14th report?

15:19:19 14 A. No. That only applies to regulated

15:19:24 15 asbestos that's used in products. You're not going

15:19:25 16 to see that in any of these samples. They're just

15:19:32 17 individual bundles. You're not going to see big

15:19:35 18 matted fibers like you do with a product that has

15:19:38 19 chrysotile in it or amosite in it or crocidolite in

15:19:42 20 it. That's a geological definition.

15:19:50 21 Q. Is there any authority that you would cite

15:19:53 22 to support that statement you just made?

15:19:58 23 A. Any asbestiform definition for any of the

15:20:03 24 mines that -- it's a geological definition. It is

15:20:09 25 not something you would see, and it's not a

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15:57:24 **1 asbestos, and that would be more accurate for the**  
15:57:26 **2 detection limit for weight percent.**  
15:57:28 **3 I don't mean to be thinking out loud, but**  
15:57:30 **4 I think in the supplement report that's something we**  
15:57:33 **5 can do. That way you're not picking something. You**  
15:57:39 **6 say, okay, for this I measured 60 or 70 asbestos**  
15:57:43 **7 structures and it came from the Vermont mine and**  
15:57:46 **8 here's the average length and width, so I'm going to**  
15:57:49 **9 use that for the analytical sensitivity.**  
15:57:52 **10 I don't mean to come up with an idea**  
15:57:54 **11 sitting here.**  
15:57:56 **12** MR. HORN: Just created more work.  
15:57:58 **13** THE WITNESS: It's the nerd in me, I  
15:58:01 **14** guess.  
15:58:02 **15** Q. (By Mr. Horn) And just so it's clear for  
15:58:04 **16** the record, the analytical sensitivity, when you use  
15:58:09 **17** it with a weight percentage, is that just dictated by  
15:58:12 **18** the protocol that you're using? Or when would you  
15:58:15 **19** use that versus something else?  
15:58:16 **20** A. Well, most of these protocols call for a  
15:58:18 **21** weight percent. But in order to have a weight  
15:58:20 **22** percent, you have to count all the number of fibers  
15:58:22 **23** and structures that are in there. So it's literally  
15:58:26 **24** how you report it.  
15:58:27 **25** Nothing changes how you collect the data.

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15:59:57 **1** MR. HORN: That's all I have.  
16:00:02 **2** MR. EWALD: I'm just going to put on the  
16:00:03 **3** record, Ethan, I just haven't seen the letter or  
16:00:07 **4** the back and forth you referenced about Leavitt.  
16:00:09 **5** I don't need to reserve any rights, but I'm not  
16:00:12 **6** familiar with it so I just wanted to make note  
16:00:15 **7** of it in case people take issue with it.  
16:00:20 **8** MR. HORN: We sent a link out that  
16:00:23 **9** contained a lot of materials, and it's tucked in  
16:00:26 **10** there.  
16:00:29 **11** MR. EWALD: All right.  
16:00:30 **12** MR. HORN: Before we go, let me just email  
16:00:33 **13** it to both of you.  
16:07:06 **14** (Deposition concluded at 4:00 p.m.)  
**15** (Pursuant to Rule 30(e) of the Federal  
**16** Rules of Civil Procedure and/or OCGA 9-11-30(e),  
**17** signature of the witness has been reserved.)  
**18** (Original transcript sent to McCarter &  
**19** English, LLP.)  
**20**  
**21**  
**22**  
**23**  
**24**  
**25**

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15:58:30 **1 So any of these TEM count sheets, you would take the**  
15:58:34 **2 average length and width of everything in there for**  
15:58:38 **3 these weight percents that we have reported.**  
15:58:41 **4 For example, Table 4, we found a**  
15:58:45 **5 concentration of 53,000 asbestos structures per gram.**  
15:58:51 **6 That number of fibers that made that 53,000 is the**  
15:58:55 **7 same number of fibers that you would do the exact**  
15:58:58 **8 same calculations. Instead of fibers per gram, it's**  
15:59:03 **9 going through and measuring every length, every**  
15:59:08 **10 width, and typically they end up in picograms of some**  
15:59:13 **11 amount, and that's added all up, and then you go**  
15:59:16 **12 through the exact same calculations that you go**  
15:59:18 **13 through to determine how many fibers or bundles per**  
15:59:21 **14 gram. It's just the way they express the data.**  
15:59:24 **15 In my opinion, it is better to have fibers**  
15:59:27 **16 and bundles per gram, because if you measure an**  
15:59:31 **17 exposure, it's always fibers per cubic centimeter of**  
15:59:37 **18 air. It's not weight percent of a cubic centimeter**  
15:59:40 **19 of air. That's been shown to be completely**  
15:59:43 **20 inaccurate, and it doesn't tell you anything about**  
15:59:45 **21 your potential exposure.**  
15:59:46 **22 That's why I believe the fibers per gram**  
15:59:50 **23 or fiber bundles per gram is important, because it**  
15:59:53 **24 gives you some idea of the potential for exposure**  
15:59:56 **25 when measuring fibers per cc.**

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**1** C E R T I F I C A T E  
**2**  
**3** STATE OF GEORGIA:  
**4** COUNTY OF GWINNETT:  
**5**  
**6** I hereby certify that the foregoing  
**7** transcript was taken down, as stated in the  
**8** caption, and the questions and answers thereto  
**9** were reduced to typewriting under my direction;  
**10** that the foregoing pages 1 through 131 represent  
**11** a true, complete, and correct transcript of the  
**12** evidence given upon said hearing, and I further  
**13** certify that I am not of kin or counsel to the  
**14** parties in the case; am not in the regular  
**15** employ of counsel for any of said parties; nor  
**16** am I in anywise interested in the result of said  
**17** case.  
**18** This, the 10th day of January 2019.  
**19**  
**20**  
**21** DEBRA R. LUTHER, B-881  
Georgia Certified Court Reporter  
**22**  
**23**  
**24**  
**25**

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DEPOSITION OF WILLIAM E. LONGO, PhD /DRL

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If supplemental or additional pages are necessary, please furnish same in typewriting annexed to this deposition.

WILLIAM E. LONGO, PhD

Sworn to and subscribed before me,

This, the \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_.

Notary Public  
My commission expires: \_\_\_\_\_

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DEPOSITION OF WILLIAM E. LONGO, PhD /DRL

I do hereby certify that I have read all questions propounded to me and all answers given by me on the 7th day of January 2019, taken before Debra R. Luther, and that:

- \_\_\_\_\_ 1) There are no changes noted.  
\_\_\_\_\_ 2) The following changes are noted:

Pursuant to Rule 30(e) of the Federal Rules of Civil Procedure and/or the Official Code of Georgia Annotated 9-11-30(e), both of which read in part: Any changes in form or substance which you desire to make shall be entered upon the deposition...with a statement of the reasons given...for making them. Accordingly, to assist you in effecting corrections, please use the form below:

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